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PATENT & TRADEMARK OFFICE

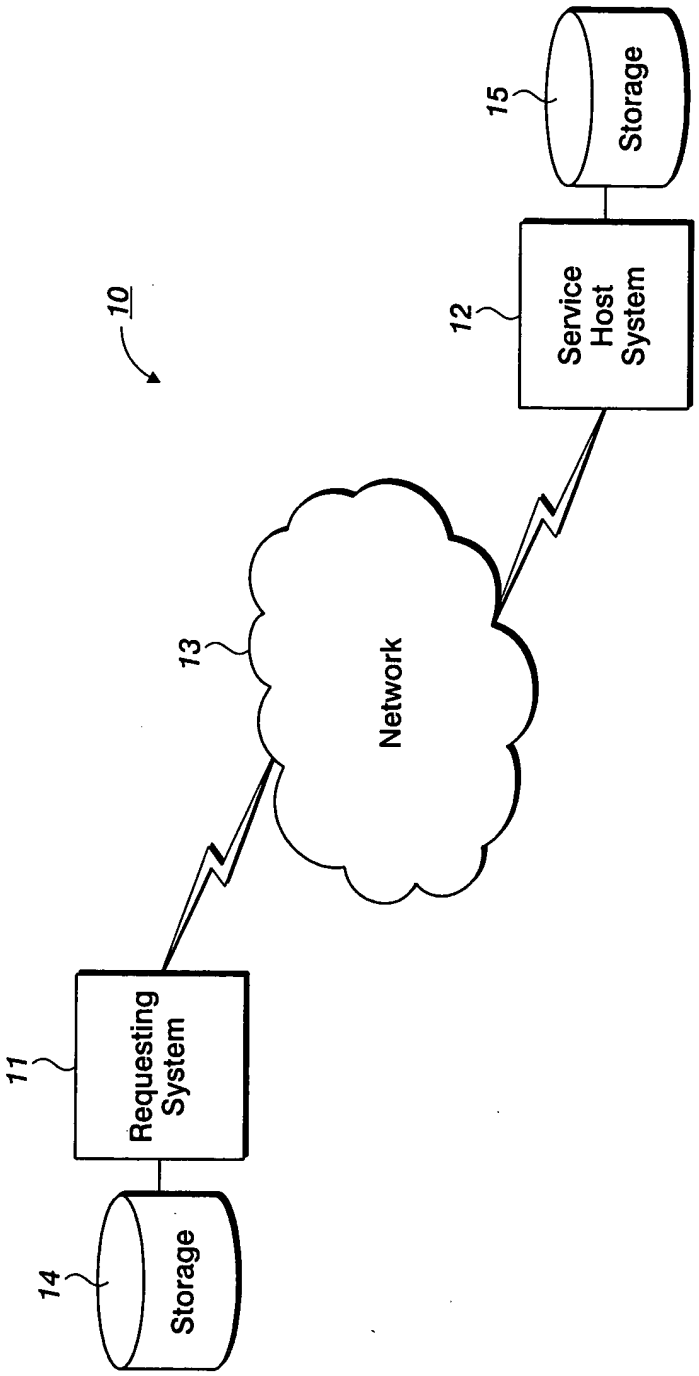


FIG. 1

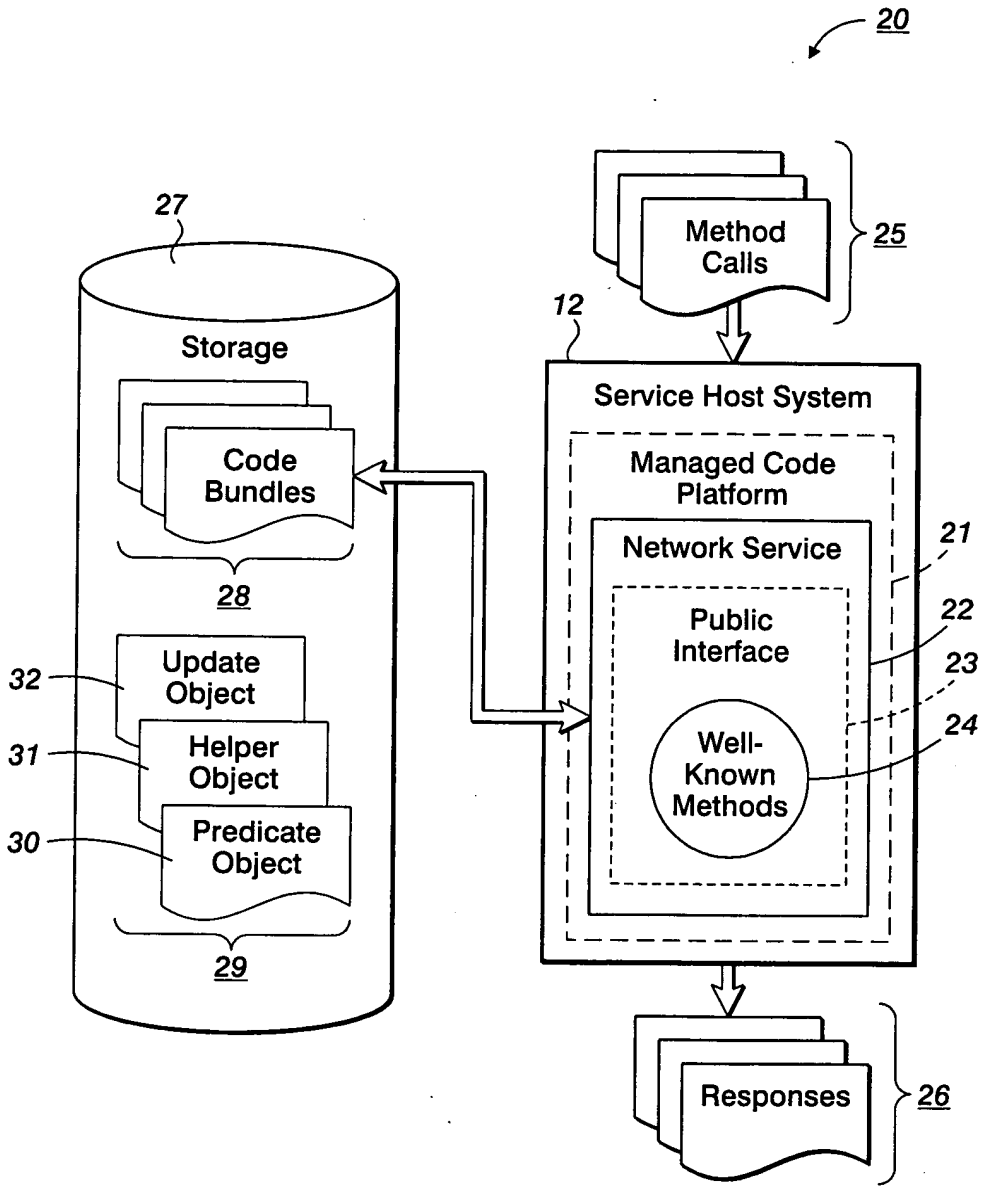
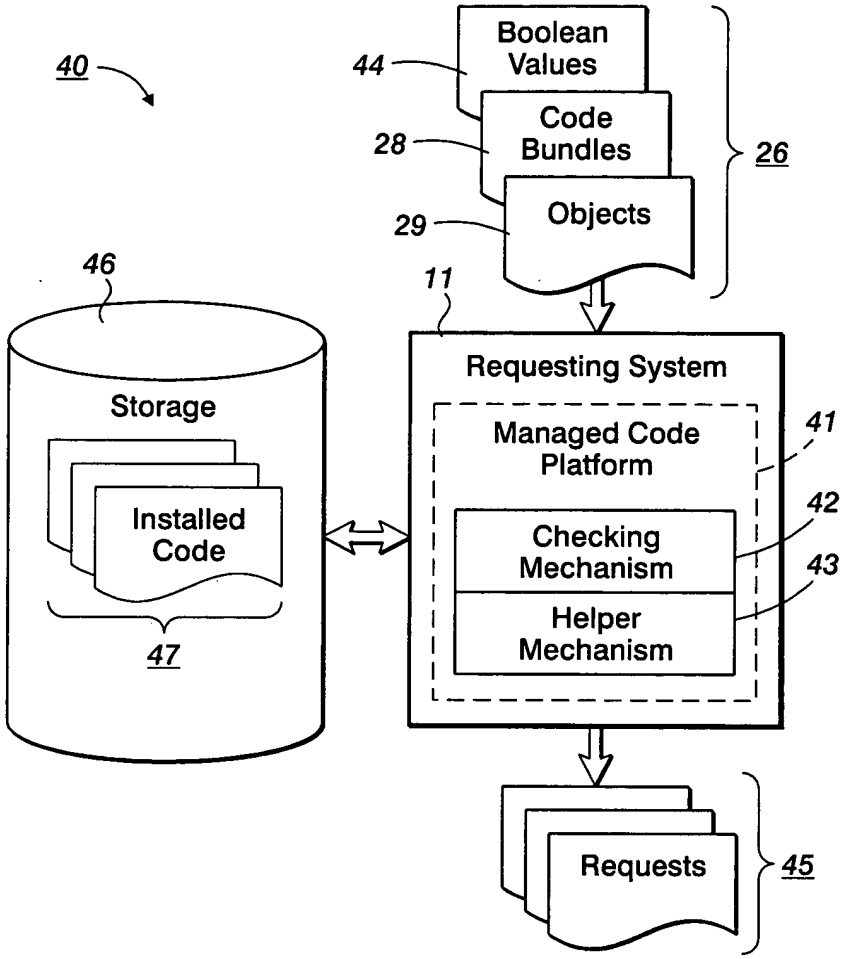

20
Method Calls
25
27
12
Storage
Service Host System
Code Bundles
Managed Code Platform
Network Service
21
28
Public Interface
22
23
32
Update Object
Helper Object
31
24
Well-Known Methods
30
Predicate Object
29
Responses
26

FIG. 2

FIG. 3




```
60
                    61
Public interface SpeakeasyComponent{
        public boolean providesServiceInstaller();
        public PredicateObject verifyClientEnvironment();
        public InstallableCodeBundle getServiceInstaller():
        public boolean codeUpdateRequired(String versionDescriptor);
}
```

62

FIG. 4

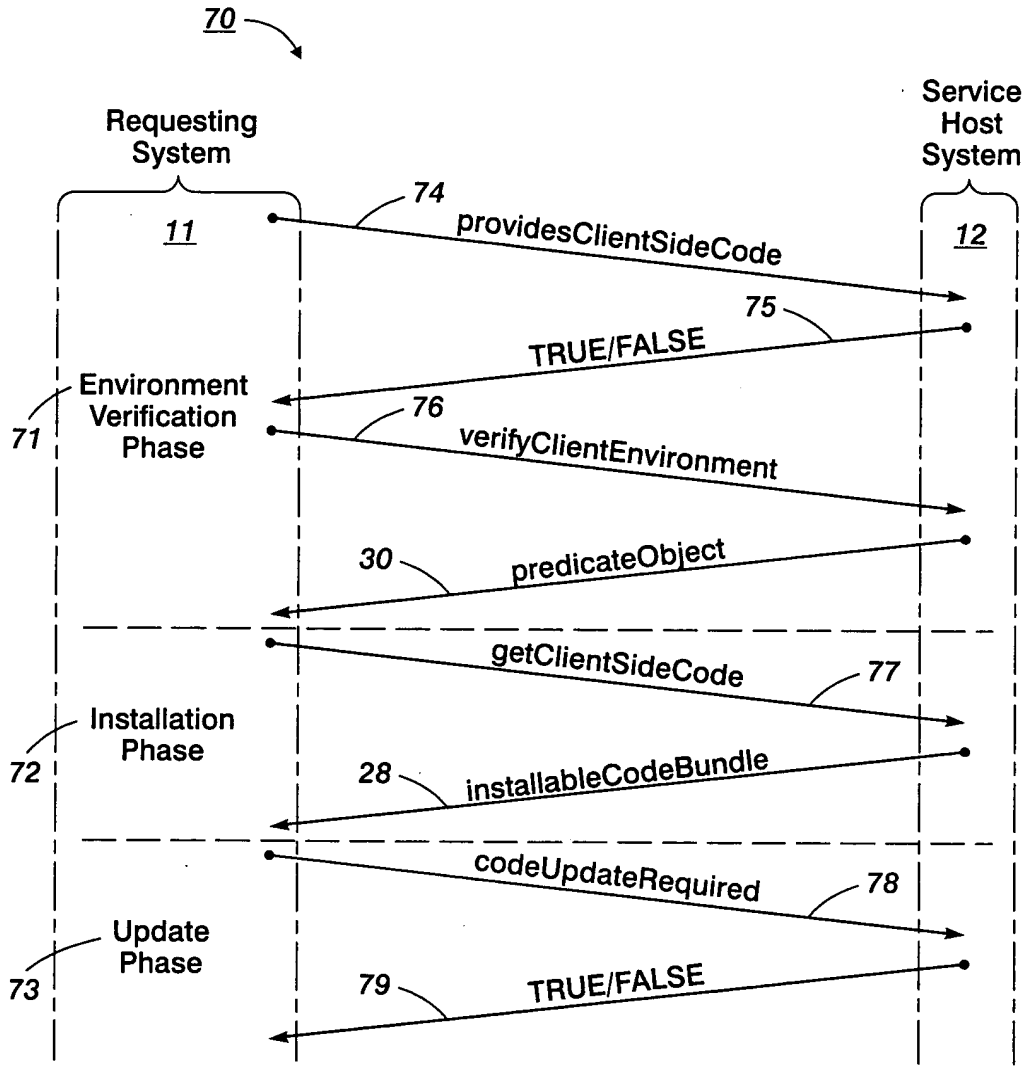

70
Requesting System
11
Service Host System
12
74
providesClientSideCode
75
TRUE/FALSE
Environment Verification Phase
71
76
verifyClientEnvironment
30
predicateObject
getClientSideCode
77
Installation Phase
72
28
installableCodeBundle
codeUpdateRequired
78
Update Phase
73
79
TRUE/FALSE

FIG. 5

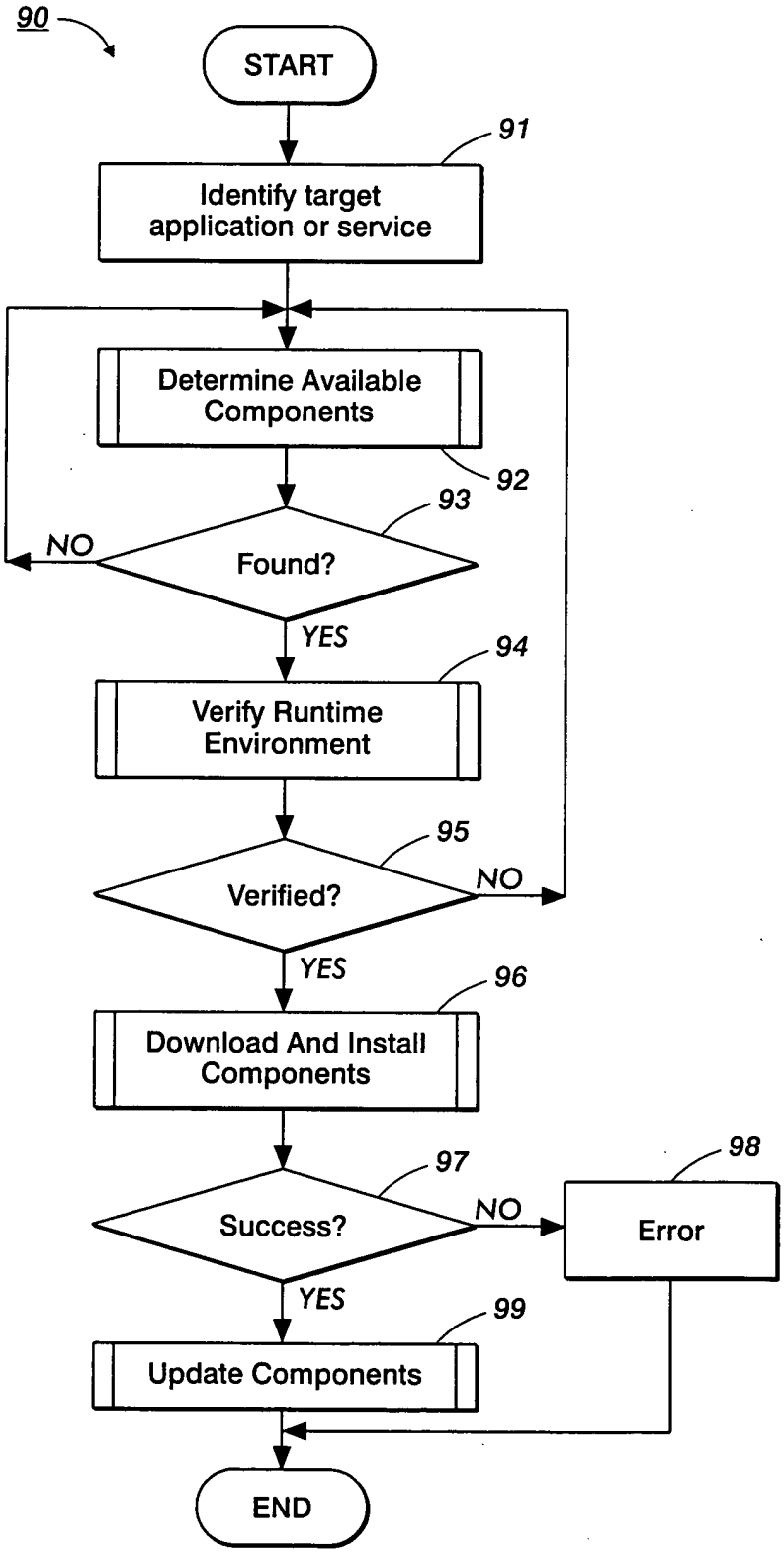

90
START
91
Identify target application or service
Determine Available Components
92
93
Found?
NO
YES
94
Verify Runtime Environment
95
Verified?
NO
YES
96
Download And Install Components
97
Success?
NO
98
Error
YES
99
Update Components
END

FIG. 6

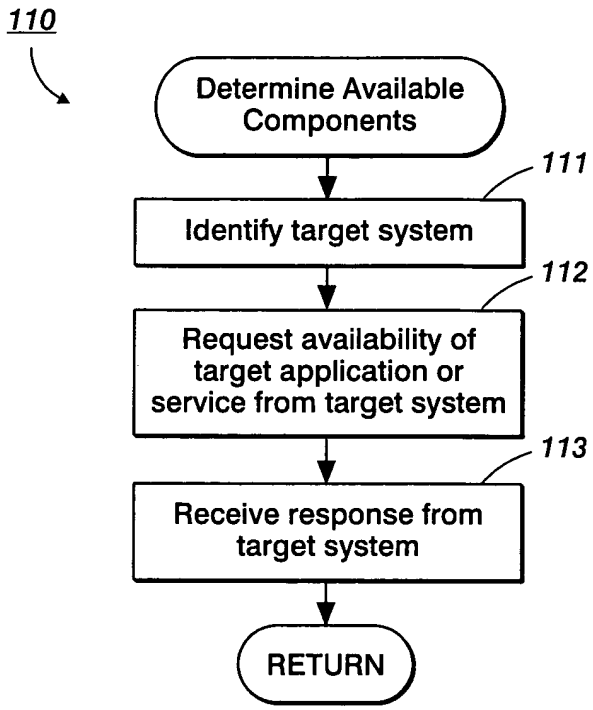

110
Determine Available Components
111
Identify target system
112
Request availability of target application or service from target system
113
Receive response from target system
RETURN

FIG. 7

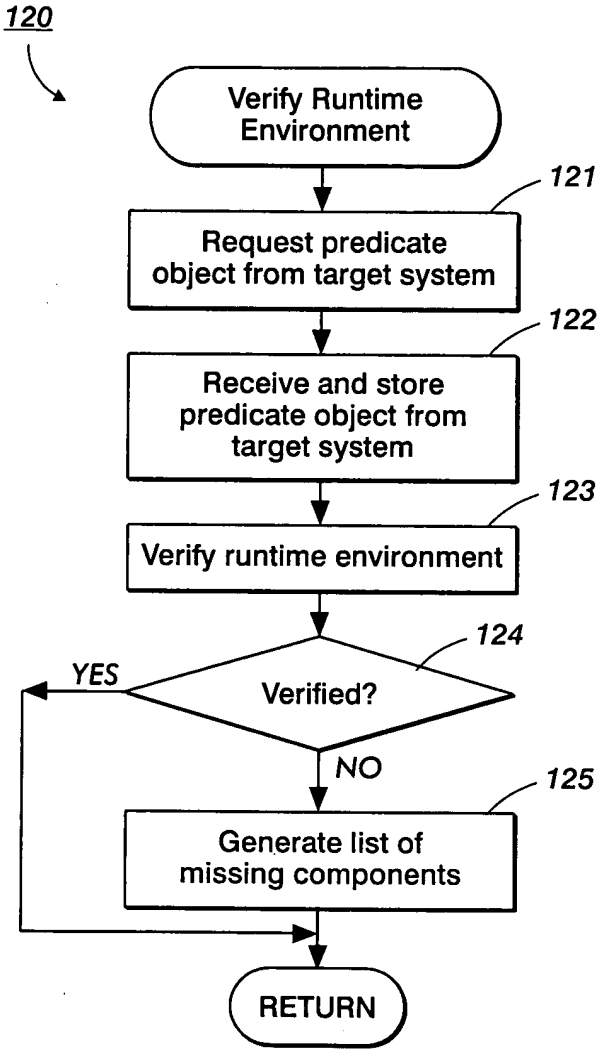
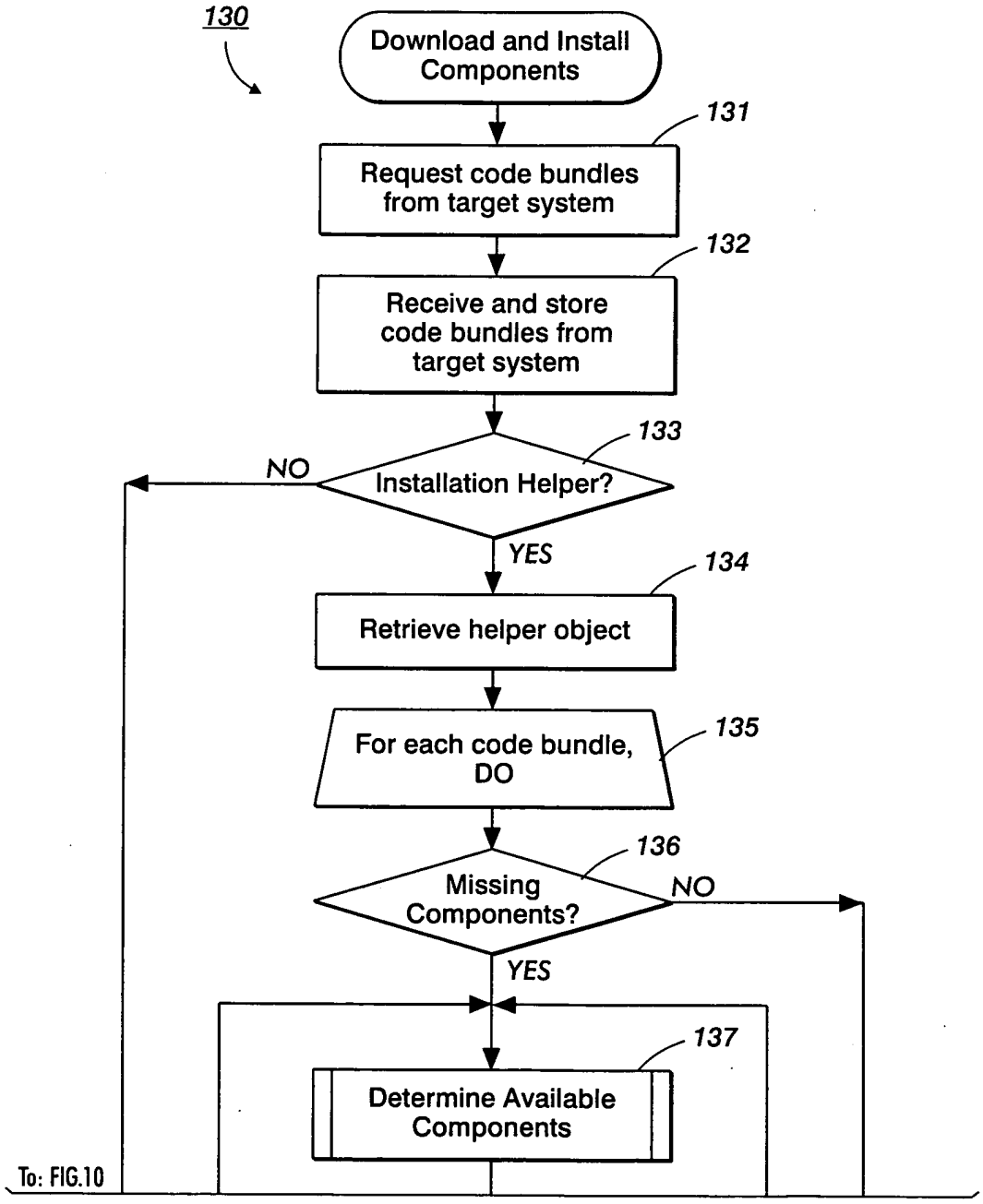

120
Verify Runtime Environment
121
Request predicate object from target system
122
Receive and store predicate object from target system
123
Verify runtime environment
124
Verified?
YES
NO
125
Generate list of missing components
RETURN

FIG. 8

FIG. 9


130
Download and Install Components
131
Request code bundles from target system
132
Receive and store code bundles from target system
133
Installation Helper?
NO
YES
134
Retrieve helper object
135
For each code bundle, DO
136
Missing Components?
NO
YES
137
Determine Available Components
To: FIG.10

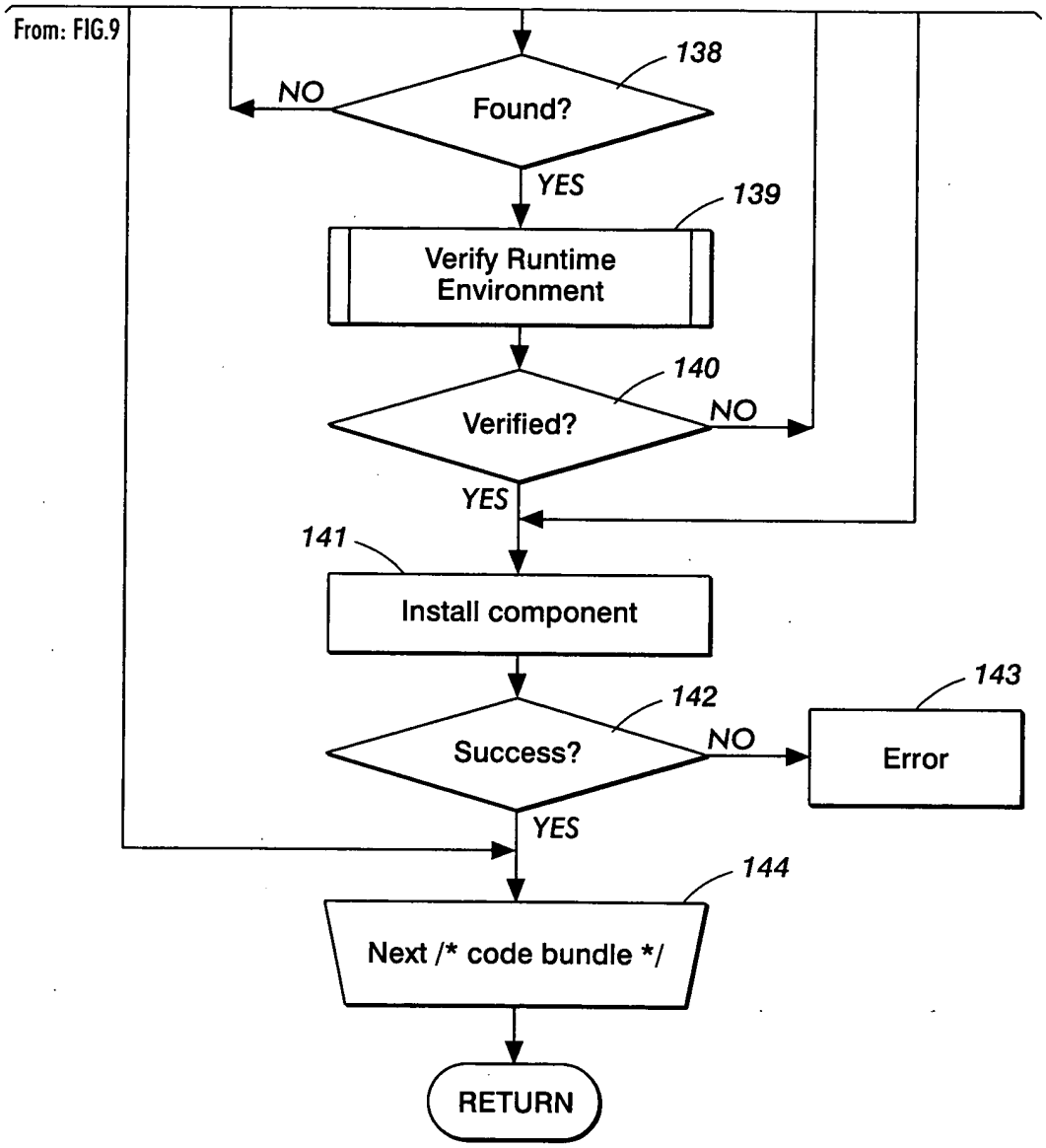

From: FIG.9
138
Found?
NO
YES
139
Verify Runtime Environment
140
Verified?
NO
YES
141
Install component
142
Success?
NO
143
Error
YES
144
Next /* code bundle */
RETURN

FIG. 10

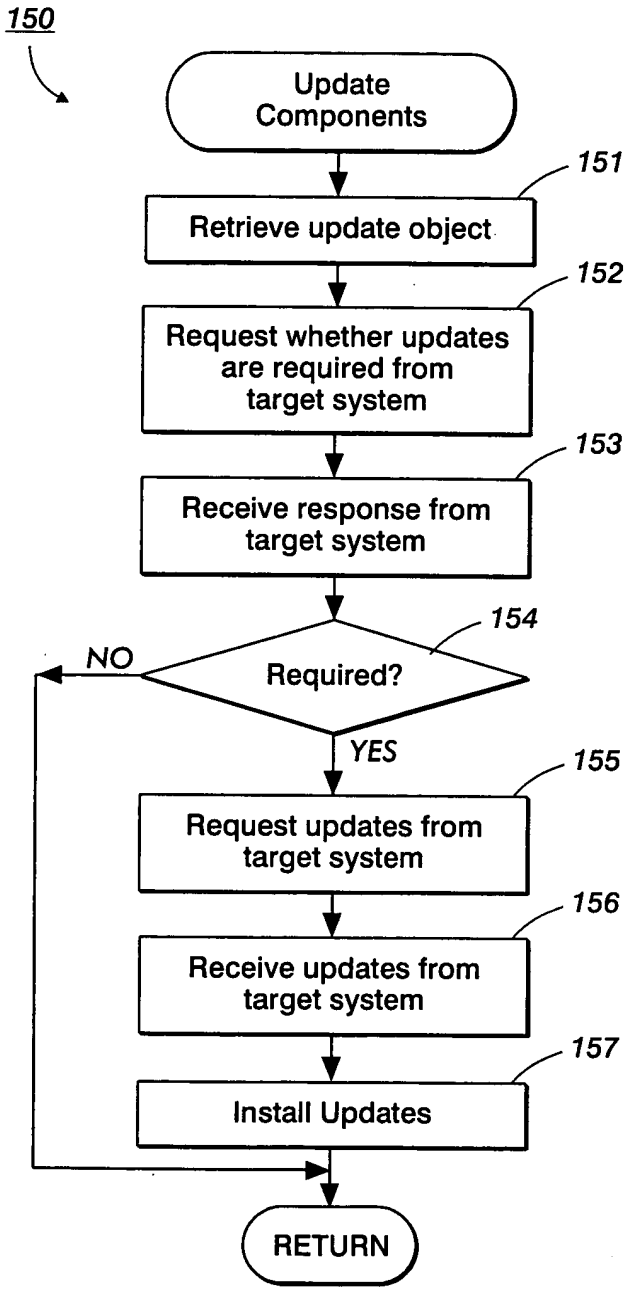

150
Update Components
151
Retrieve update object
152
Request whether updates are required from target system
153
Receive response from target system
154
Required?
NO
YES
155
Request updates from target system
156
Receive updates from target system
157
Install Updates
RETURN

FIG. 11